MINI
PROJECT
REPORT ON

“Potter Brain”

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1. Introduction/Aims and Objective:

The ‘**POTTER BRAIN**’ project will be developed to overcome the time consuming problem of manual system. Apart from that in current system, checking the answer sheets after taking test, waste the examiners time, so this application will check the correct answer and save the examiner time and carry the examination in an effective manner.

The users which are use this system don’t need to high computing knowledge and also system will inform them while entering invalid data. The aim of this project is to computerized the existing manual system and help the examiners to save their valuable time and important data. Apart from this, data which are exist in this system, will exist for long period of time and will be easy accessible. This project helps the examiners to manage their services in a good way and provide a better service to their users.

The objective of this project is to manage the details of students, examinations, marks, courses and papers in a good manner. The performance of the application will be fully control by administrator and administrator can guaranty any one to access. The project will reduce the manual process in managing examinations and all issues regarding that.

Functionalities of the project will be as following:

- Able the examiners to punch the MCQ questions online;
- Able the users to solve the questions online; - Examiners can manage the information regarding exam;
- Correct answers will be evaluated by system (First it should be determining by examiner);
- Users can see their result after submitting the test

Objective:

The main objective of the project POTTER BRAIN is to manage the details of students, examinations, marks, courses and papers. The project is totally at administrative end and thus only the administrator is granted the access. The purpose of the project is to build an application to reduce the manual work for managing the exam and we will follow to achieve these objectives in this project.

- To create an appropriate platform for best managing of MCQ test;
- To overcome the time consuming issues and taking MCQ tests;
- To release the marks of the test taker as soon as possible;
- To manage the information of different tests.

2. System Analysis:

Identification of Need:

Existing System:

There are various MCQ quiz applications exist in the internet with different criteria. Each of the existing applications has their own goodness and problems. In this MCQ quiz application which is designed and implemented Using JFrame & Swing based we try to overcome the existing problems with
Following features:

- Remove source confuse issue;
- Better management;
- Connection to database for better storing of data;
- Better frontend management;
- Better backend management;
- Try to decrease error issuer during runtime.

Problems in Existing System:

- We need to maintain all the student record manually. We won't be able to track the student details.
- This system has more paperwork.
- The current system might have loss of data.

Proposed System:

Manual assessment is prone to errors and is not time efficient as discussed previously. So why not automate the whole assessment process? Why would a teacher spend his/her precious time physically correcting the answer of their students? So our main objective is to create a method that would allow us to make our computers do the whole assessment work and award score to the answers accordingly.

Advantages of the proposed system:

- Students are placed in the right attitude for learning.
- Students feel more confident to discuss the material..
- The quiz provides a good lead-in for either a lecture or discussion of the material.
- Students are provided with a real foundation for intellectual growth

• Scope of the Project :

The purpose of the project is to build an application to reduce the manual work for managing the MCQ quiz and we will follow to achieve these objectives in this project.
To manage the Examination & Results. Can Use anywhere any time as it is a web-based application. This application will be used in educational institutions as well as in corporate world.

- The future we have plan to extended it to support subjective type of questions with more functionality.
- Graphically view the web.
- We have plan to support webcam while examination

3. Feasibility Study:

A feasibility study is a high-level capsule version of the entire System analysis and Design Process. The study begins by classifying the problem definition.

Feasibility is to determine if it's worth doing. Once an acceptance problem definition has been generated, the analyst develops a logical model of the system.

The system has been tasted for feasibility in the following points.

1. Technical Feasibility

2. Economical Feasibility

3. Operational Feasibility

• Technical Feasibility :

This involves questions such as whether the technology needed for the system exists, how difficult it will be to build, and whether the firm has enough experience using that technology.

The assessment is based on outline design of system requirements in terms of input, processes, output, fields, programs and procedures.

This can be qualified in terms of volume of data, trends, frequency of updating in order to give an introduction to the technical system.

• Economic Feasibility :

Establishing the cost-effectiveness of the proposed system i.e. if the benefits do not outweigh the costs then it is not worth going ahead. In the fast paced world today there is a great need of online social networking facilities.

Thus the benefits of this project in the current scenario make it economically feasible. The purpose of the economic feasibility assessment is to determine the positive

Economic benefits to the organization that the proposed system will provide.

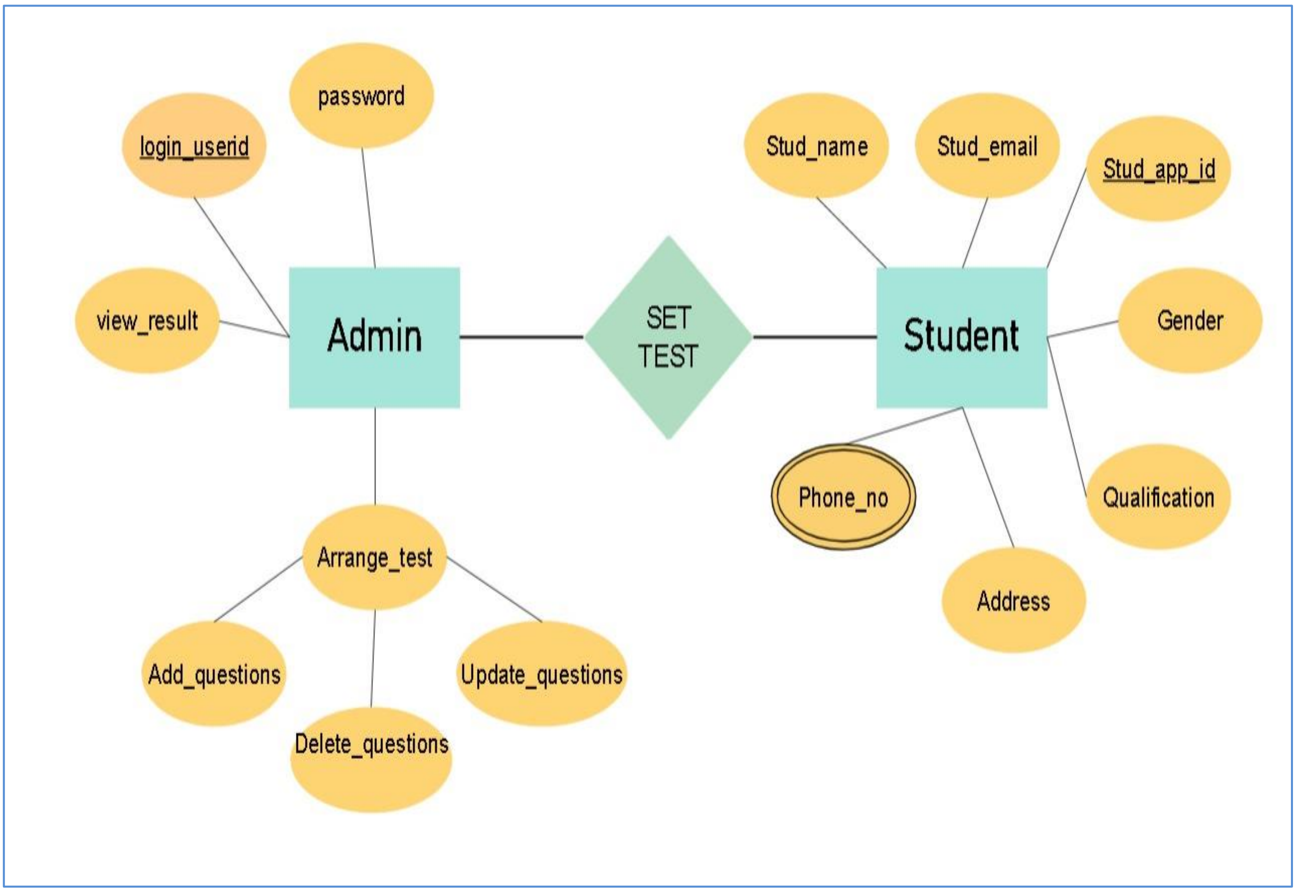
• Operational Feasibility :

Operational feasibility is the measure of how well a proposed system solves the problems, and takes advantage of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of system development

.The operational feasibility assessment focuses on the degree to which the proposed development projects fits in with the existing business environment and objectives with regard to development schedule, delivery date, corporate culture and existing business processes. To ensure success, desired operational outcomes must be imparted during design and development. These include such design-dependent parameters as reliability, maintainability, supportability, usability, reducibility, disposability, sustainability, affordability and others. These parameters are required to be considered at the early stages of design if desired operational behaviors are to be realized. A system design and development requires appropriate and timely application of engineering and management efforts to meet the previously mentioned parameters.

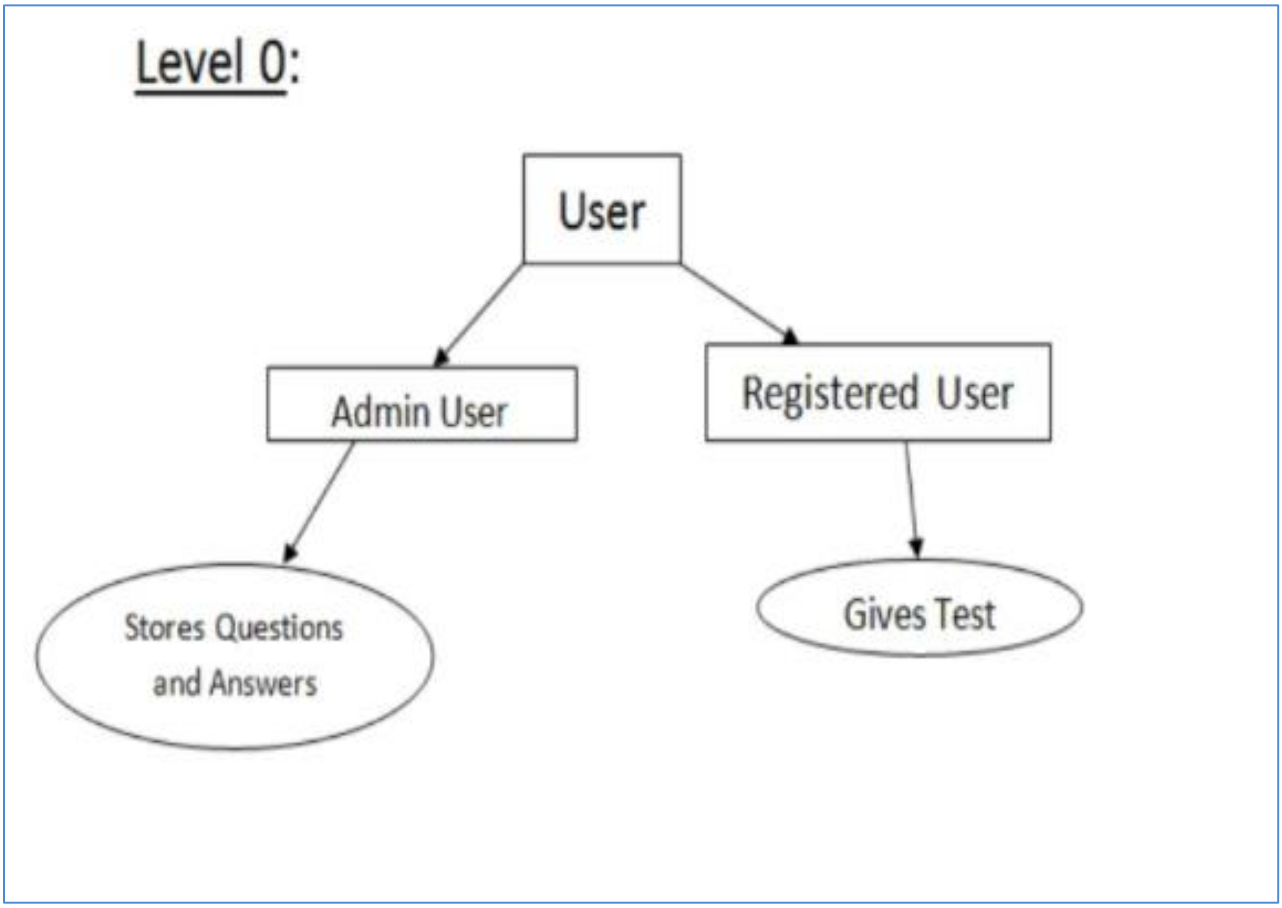
4. Diagrams:

ERD DIAGRAM

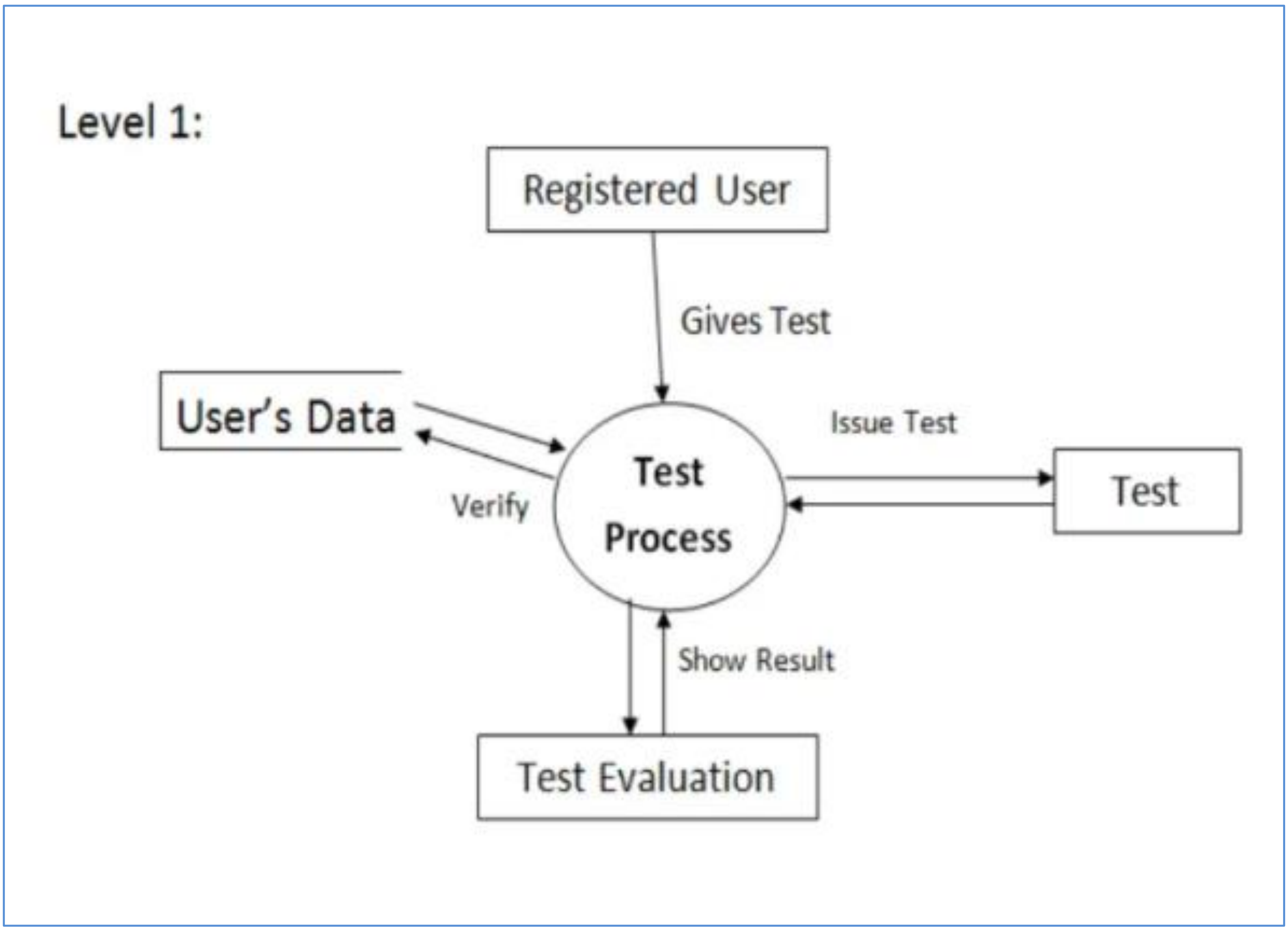


DATA FLOW DIAGRAM

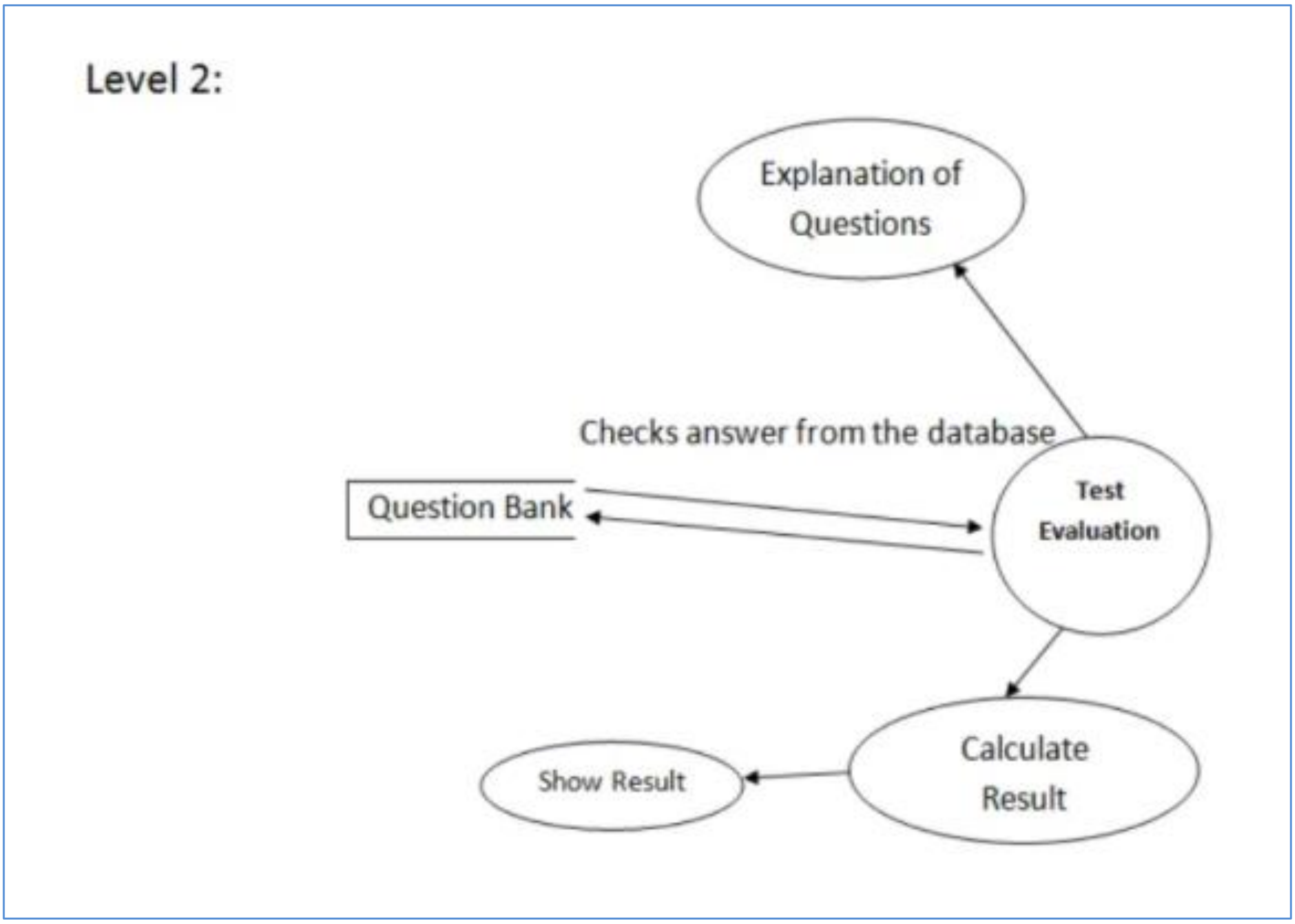
0Level Diagram



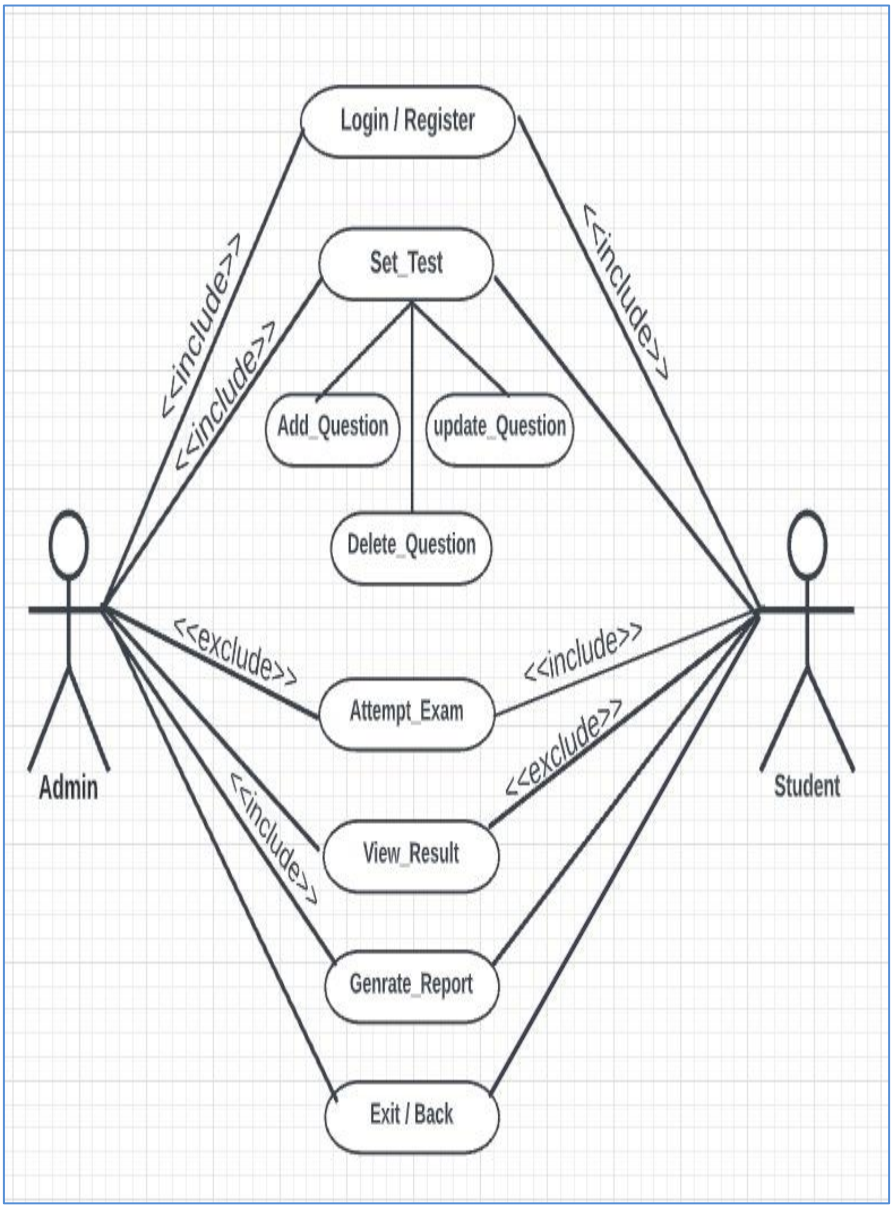
1st Level Diagram



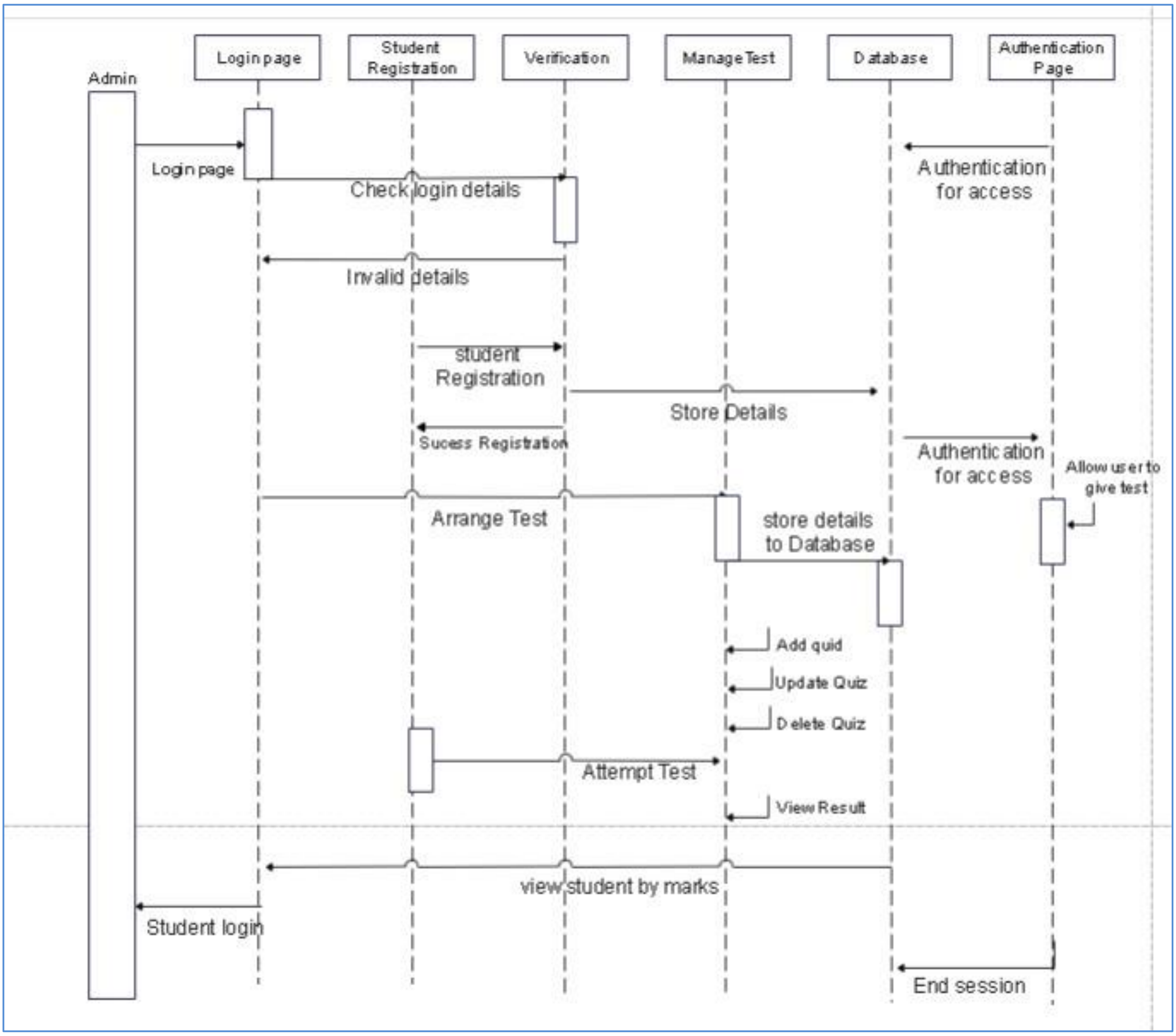
2st Level Diagram



USE CASE DIAGRAM



SEQUENCE DIAGRAM



5. S/W & H/W Requirement Specification:

H/W Configuration (Server Side):

• Processor – Core i3 & above

• Speed - 2 GHz & above

• RAM – 2 GB & above

Software (Server Side):

Operating System: Windows 10, 11

Front end: NetBeans8.0

Middle ware: Java Development Kit (JDK1.5.0)

Backend: MySQL Database Server

H/W Configuration (Client Side):

• Processor –Core i3 & above

• Speed – 2 GHz & above

• RAM – 2 GB & above

6. Data Dictionary:

Cardinality - In SQL (Structured Query Language), the term cardinality refers to **the uniqueness of data values contained in a particular column (attribute) of a database table**.

student_details:

Field	Type	Null	Default	Comments
roll_no	varchar(50)	No		
name	varchar(50)	No		
father_name	varchar(50)	No		
mother_name	varchar(50)	No		
gender	varchar(50)	No		
contact_no	varchar(10)	No		
email	varchar(50)	No		
tenth_university_name	varchar(50)	No		
tenth_percentage	varchar(10)	No		
tenth_passout_year	varchar(10)	No		
twelve_university_name	varchar(50)	No		
twelve_percentage	varchar(10)	No		
twelve_passout_year	varchar(10)	No		
graduation_university_name	varchar(50)	No		
graduation_percentage	varchar(10)	No		
graduation_passout_year	varchar(10)	No		
address	varchar(50)	No		
marks	int(5)	No		

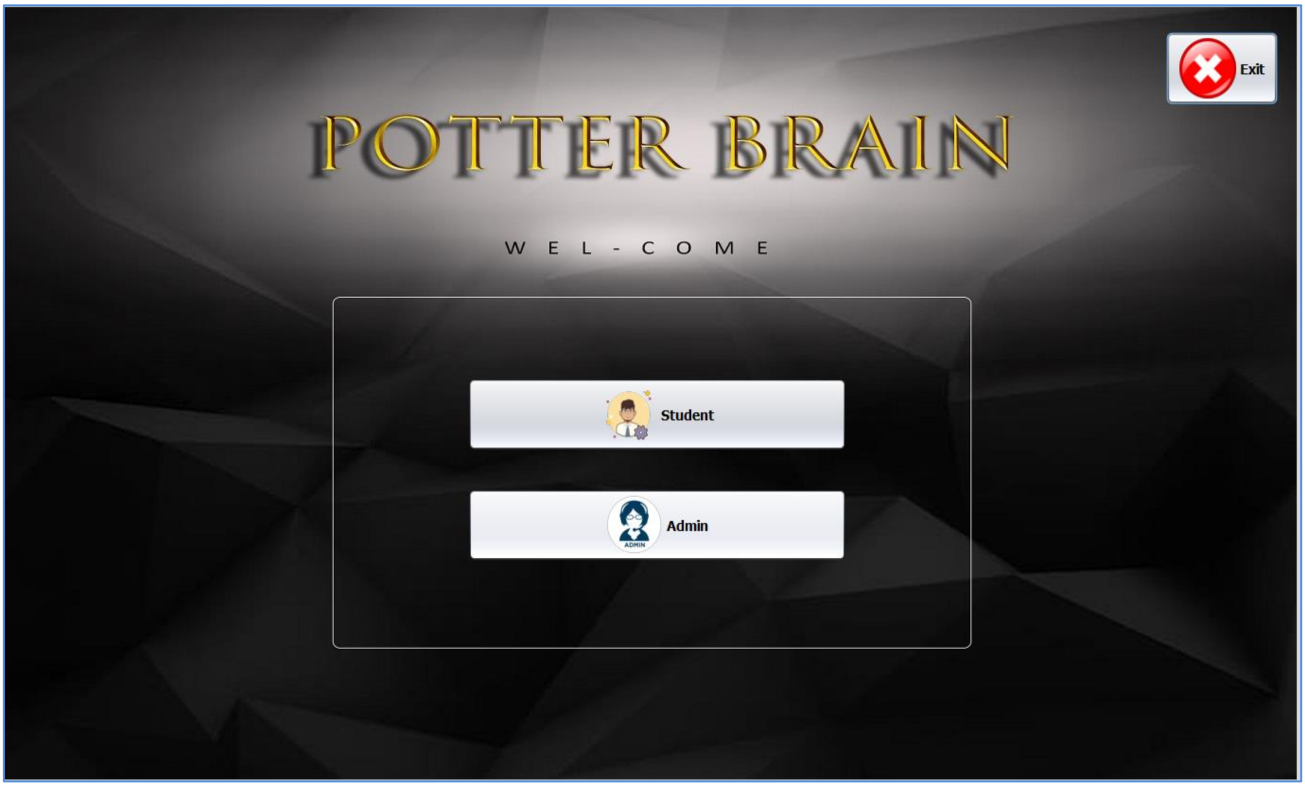
Keyname	Type	Cardinality	Field
PRIMARY	PRIMARY	0	roll_no

question details:

Field	Type	Null	Default	Comments
id	varchar(50)	No		
name	varchar(50)	No		
opt1	varchar(50)	No		
opt2	varchar(35)	No		
opt3	varchar(50)	No		
opt4	varchar(50)	No		
answer	varchar(50)	No		

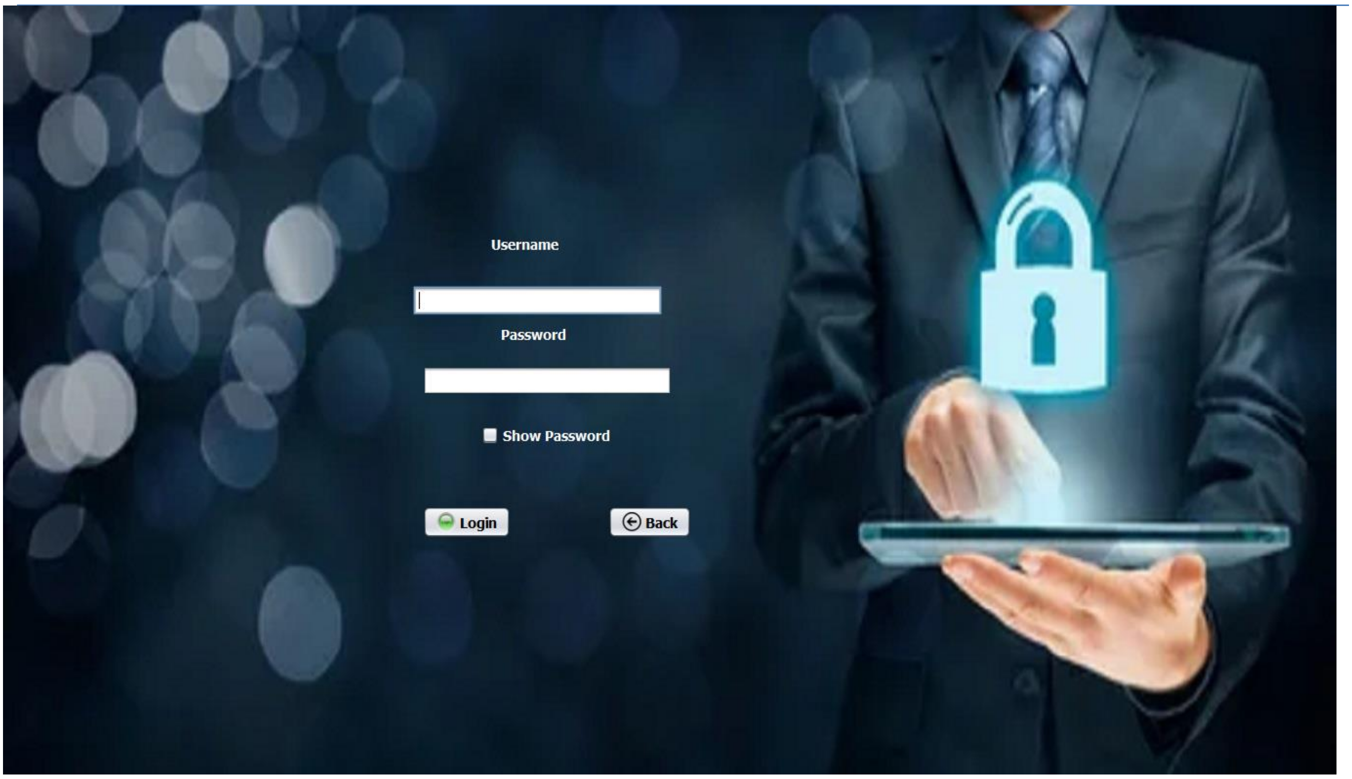
7. Screenshots: Welcome Page

Welcome page welcome's the user according to user he/she select the option of student and admin after selecting they land on login page.



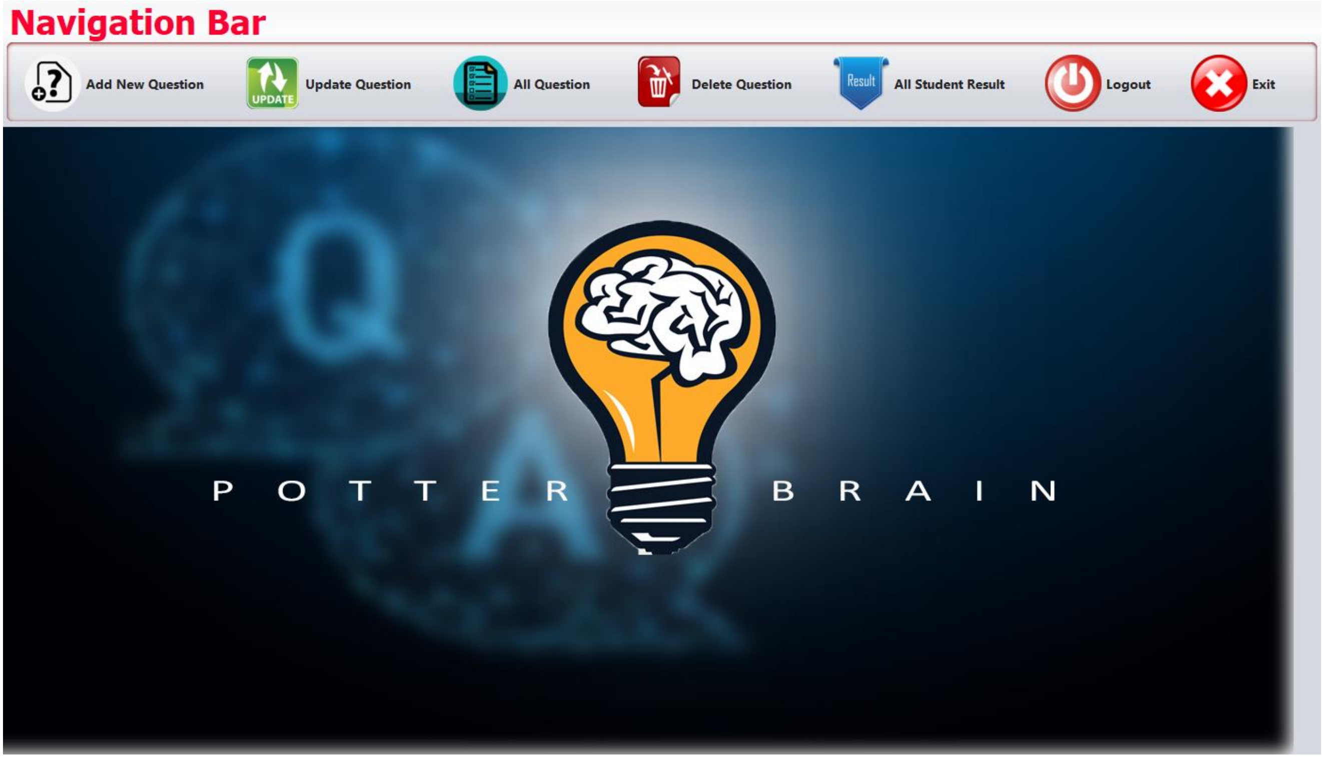
Login Page:

Admin can login with his/her User id and password.



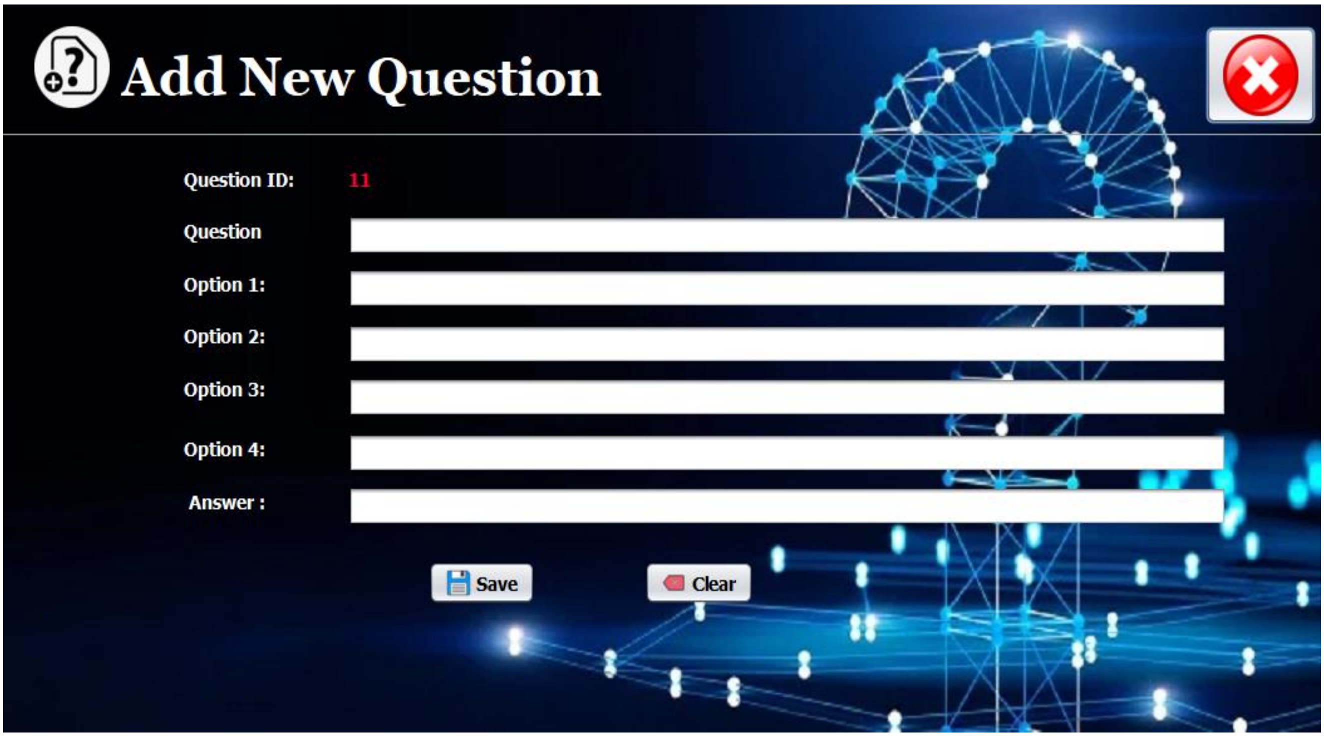
Navigation Bar:

After login admin will land on navigation page.
It navigate the admin to arrange test or examination .Admin can add ,update, delete the question and all the question ,answer will save in database also user can logout or exit the session.



Add New Question:

Admin can add the question with option answer and it will save in database.



Add New Question

Question ID: 11

Question

Option 1:

Option 2:

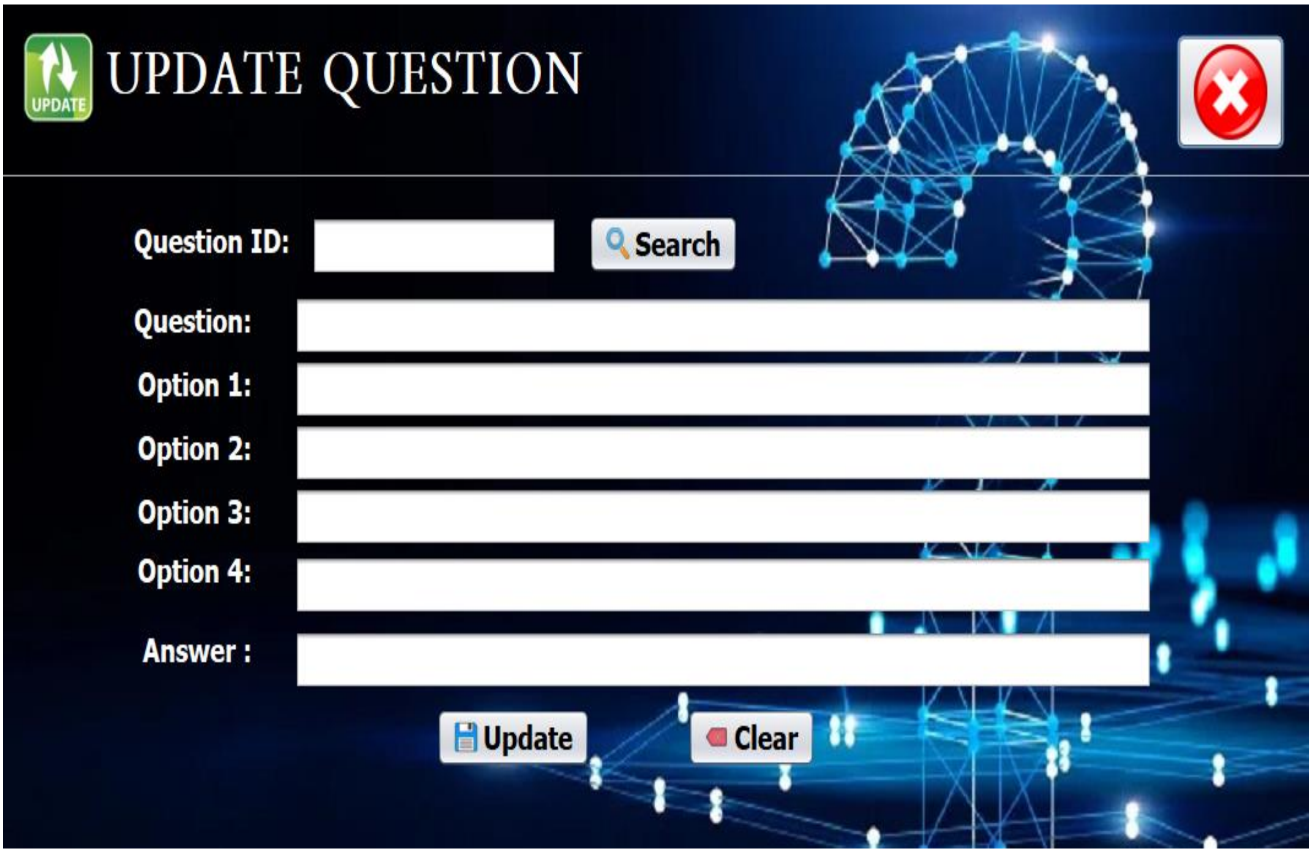
Option 3:

Option 4:

Answer :

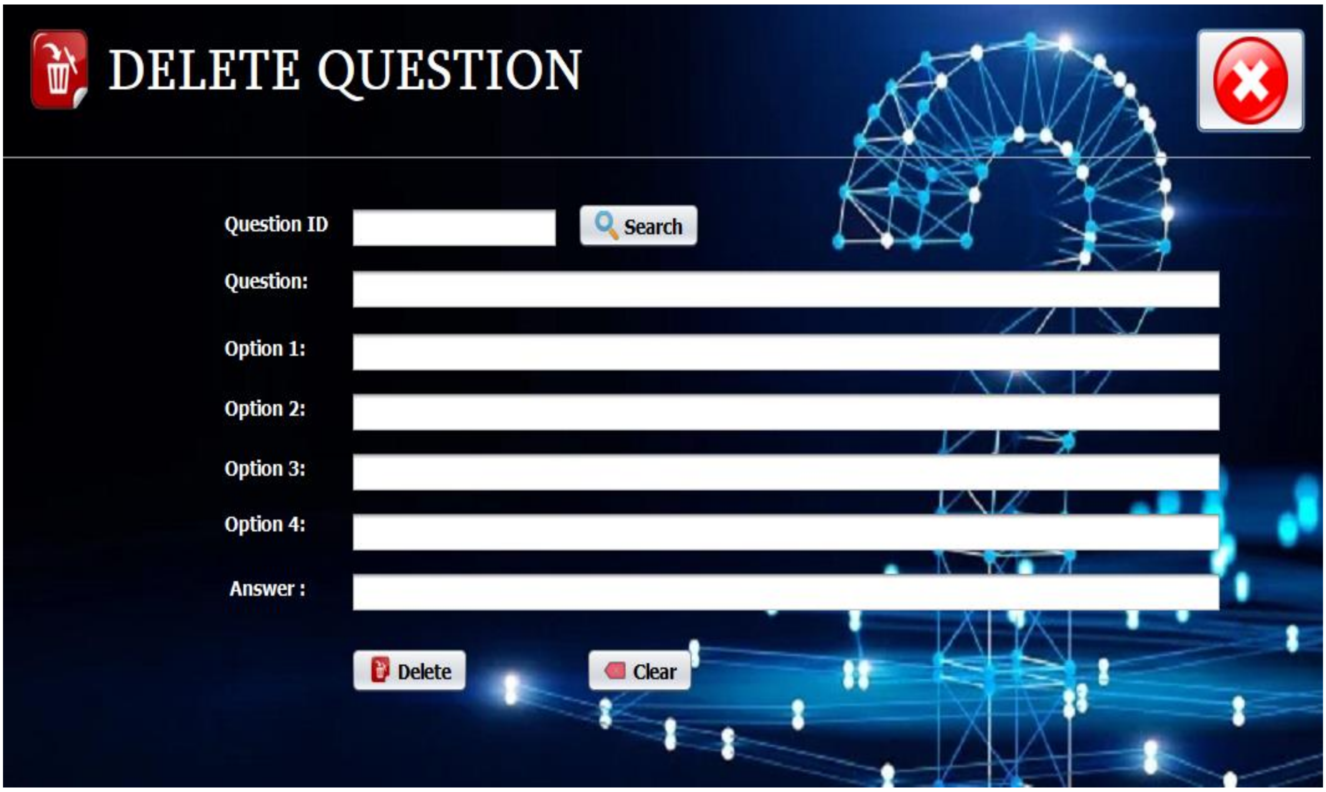
Update Question:

Here added question can be updated and saved to database.



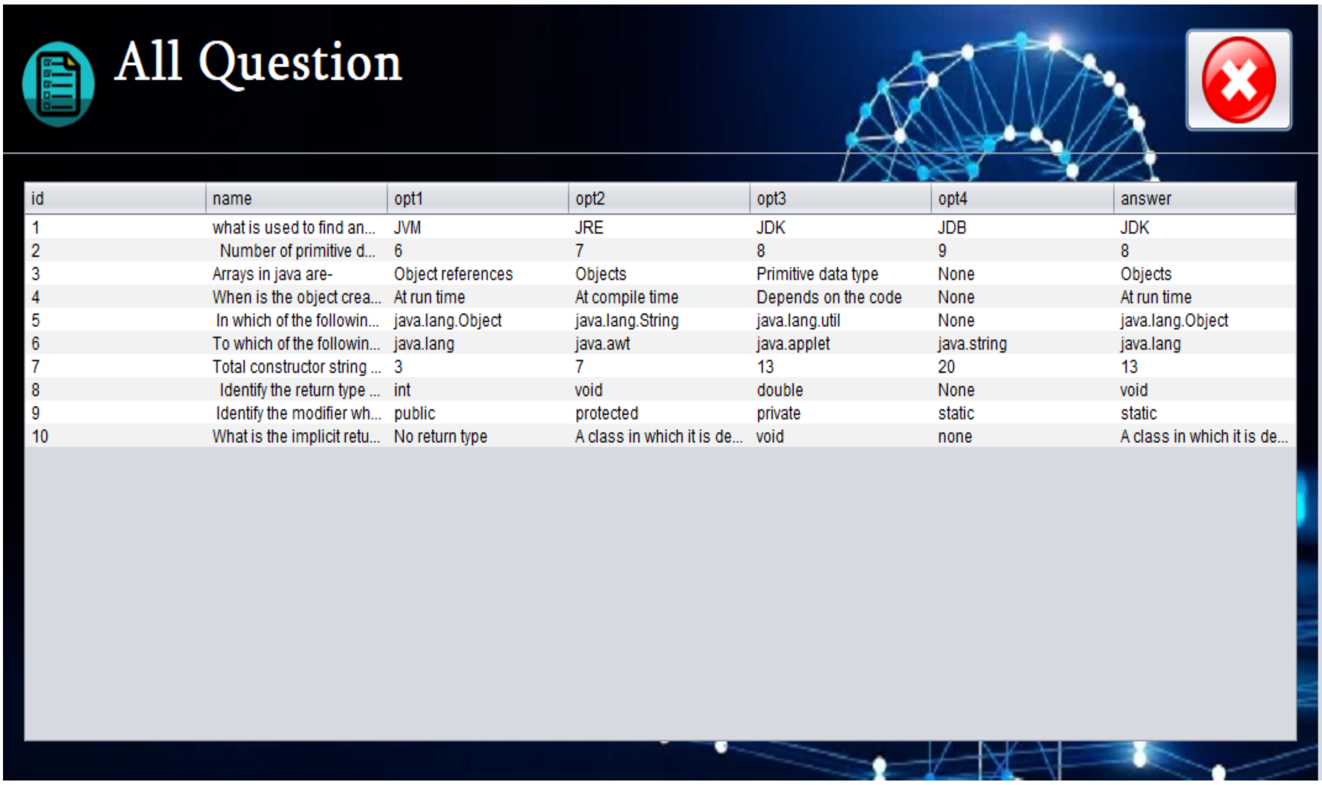
Delete Question:

Here admin can delete question and answer it will also delete from database.



All Question Details:

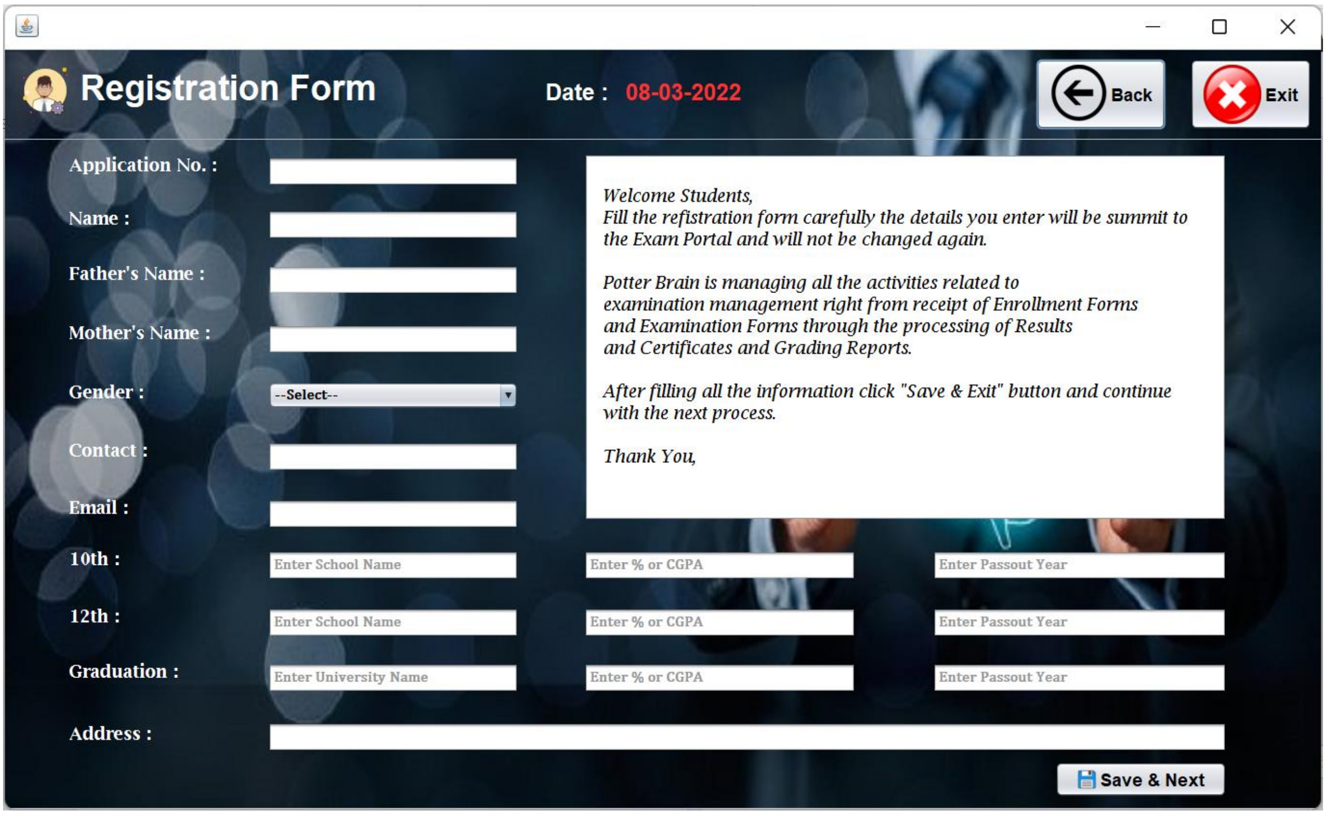
Here admin can see all question and answer its like report of all questions.



id	name	opt1	opt2	opt3	opt4	answer
1	what is used to find an...	JVM	JRE	JDK	JDB	JDK
2	Number of primitive d...	6	7	8	9	8
3	Arrays in java are-	Object references	Objects	Primitive data type	None	Objects
4	When is the object crea...	At run time	At compile time	Depends on the code	None	At run time
5	In which of the followin...	java.lang.Object	java.lang.String	java.lang.util	None	java.lang.Object
6	To which of the followin...	java.lang	java.awt	java.applet	java.string	java.lang
7	Total constructor string ...	3	7	13	20	13
8	Identify the return type ...	int	void	double	None	void
9	Identify the modifier wh...	public	protected	private	static	static
10	What is the implicit retu...	No return type	A class in which it is de...	void	none	A class in which it is de...

Registration Form:

Here student need to register ,fill all the details and application no is provided by admin all the details are mandatory for appearing for exam or test.



Registration Form

Date : 08-03-2022

Application No. :

Name :

Father's Name :

Mother's Name :

Gender : --Select--

Contact :

Email :

10th : Enter School Name | Enter % or CGPA | Enter Passout Year

12th : Enter School Name | Enter % or CGPA | Enter Passout Year

Graduation : Enter University Name | Enter % or CGPA | Enter Passout Year

Address :

Welcome Students,
Fill the refistration form carefully the details you enter will be summit to the Exam Portal and will not be changed again.

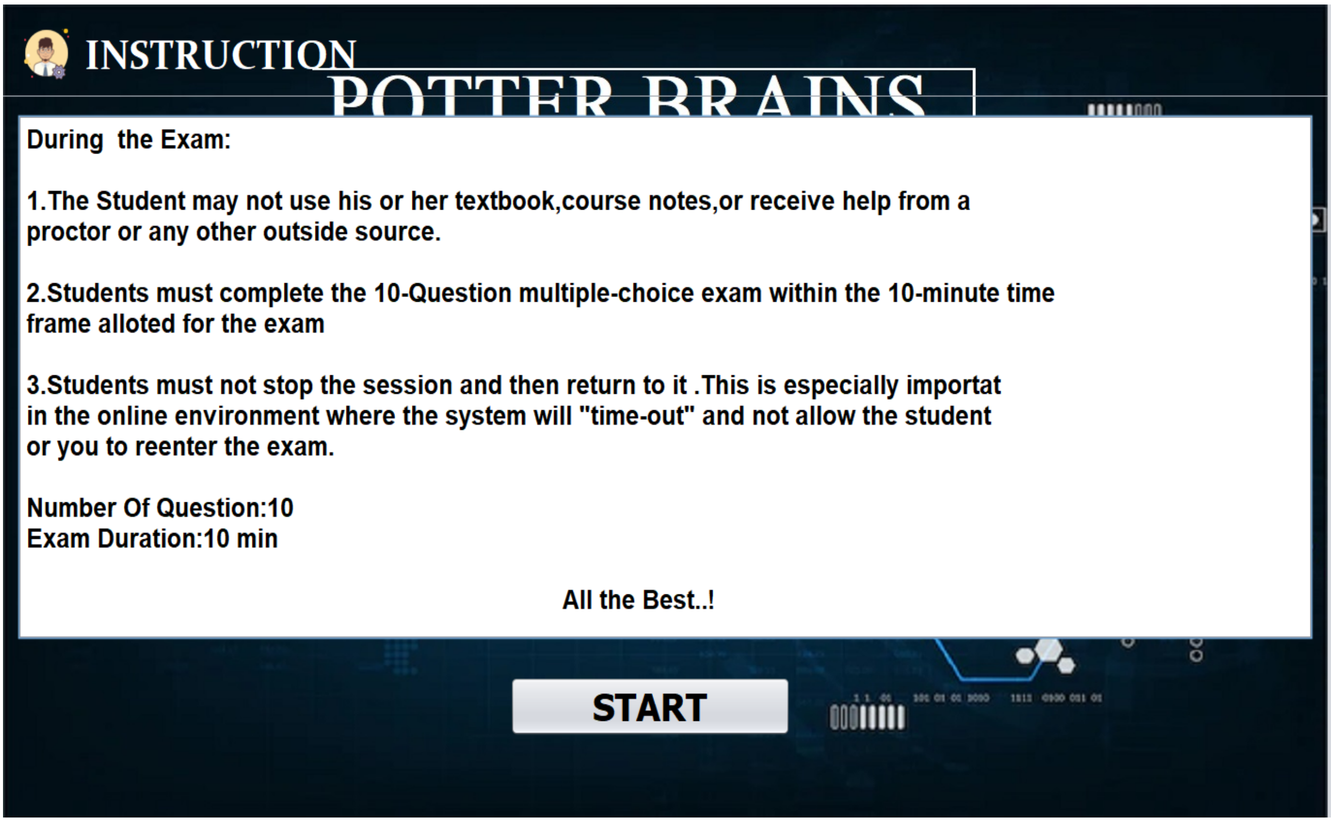
Potter Brain is managing all the activities related to examination management right from receipt of Enrollment Forms and Examination Forms through the processing of Results and Certificates and Grading Reports.

After filling all the information click "Save & Exit" button and continue with the next process.

Thank You,

Instruction Page:

Here is the instruction for the student before examination.



During the Exam:

1.The Student may not use his or her textbook,course notes,or receive help from a proctor or any other outside source.

2.Students must complete the 10-Question multiple-choice exam within the 10-minute time frame alloted for the exam

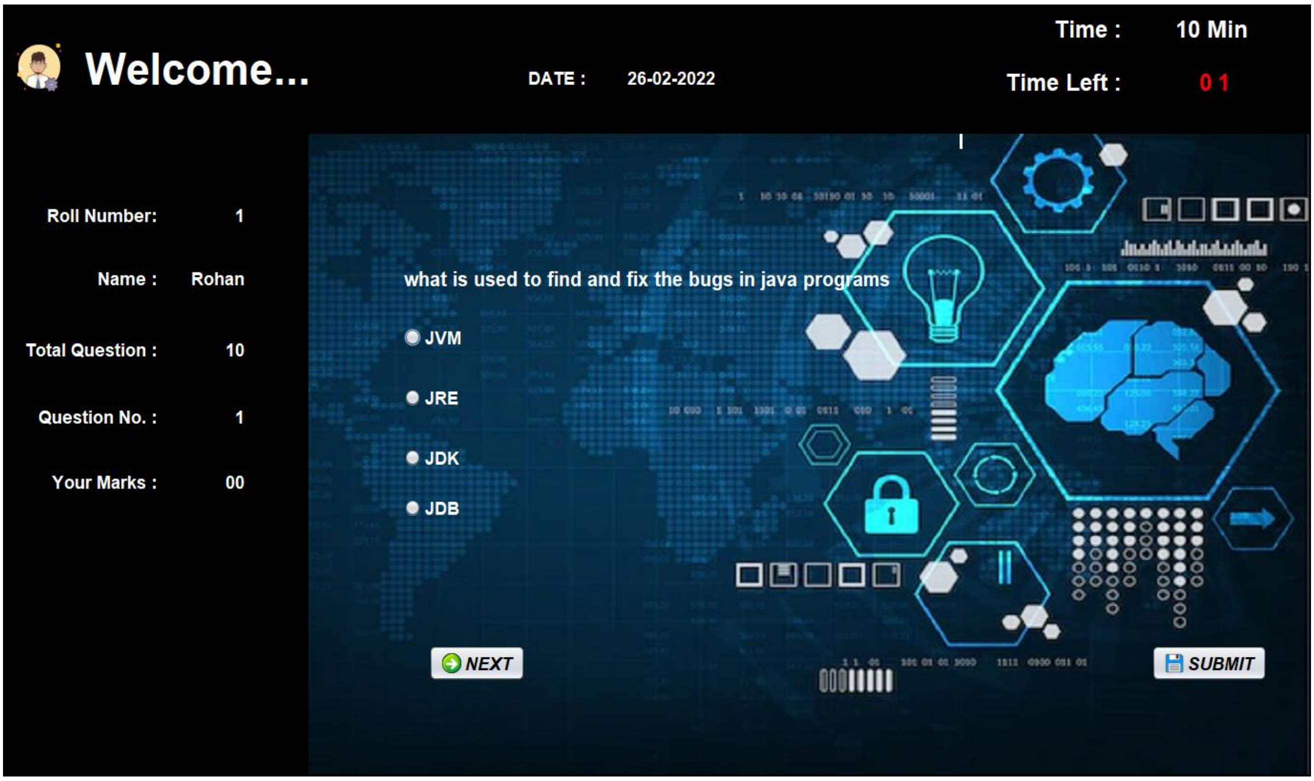
3.Students must not stop the session and then return to it .This is especially importat in the online environment where the system will "time-out" and not allow the student or you to reenter the exam.

Number Of Question:10
Exam Duration:10 min

All the Best..!

Examination Page:

Here student can start the giving test in this page time .Question no are changing according to the instruction.



Welcome...

DATE : 26-02-2022

Time : 10 Min

Time Left : 0 1

Roll Number: 1

Name : Rohan

Total Question : 10

Question No. : 1

Your Marks : 00

what is used to find and fix the bugs in java programs

○ JVM

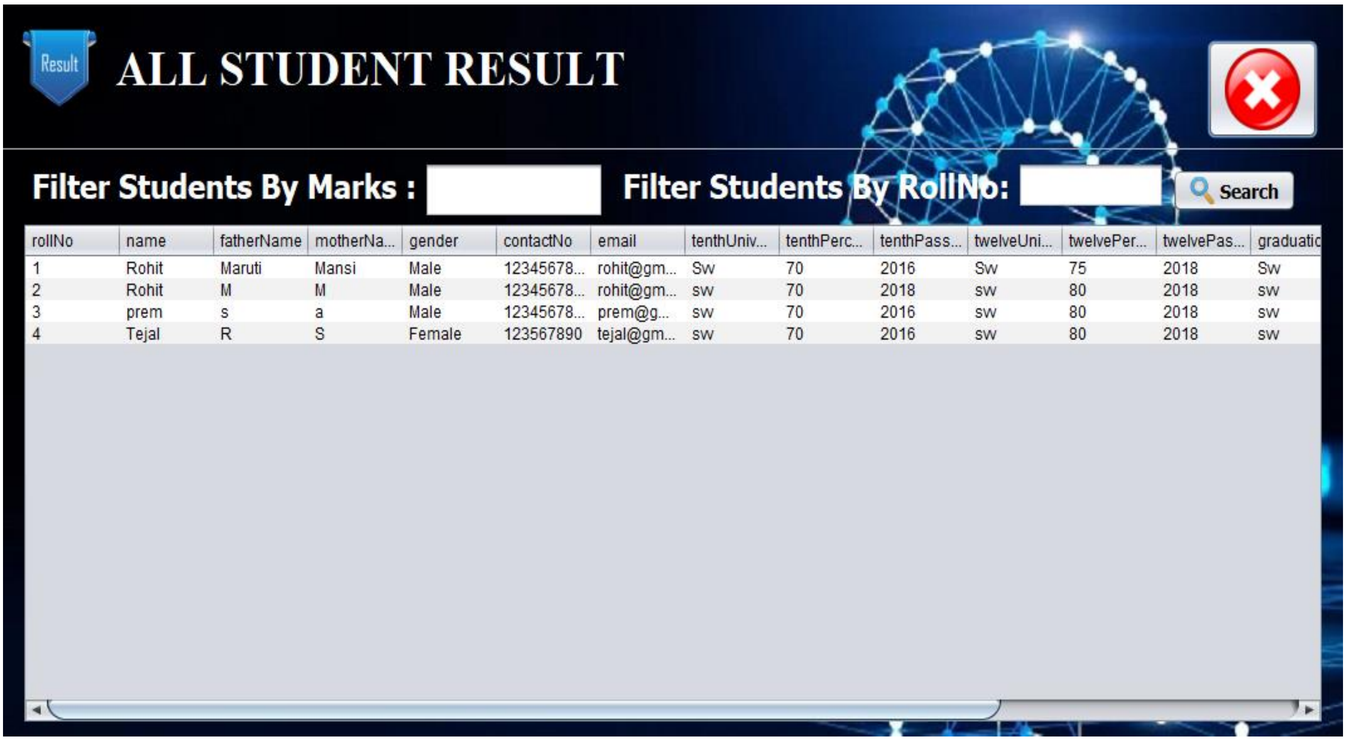
○ JRE

○ JDK

○ JDB

Student Result:

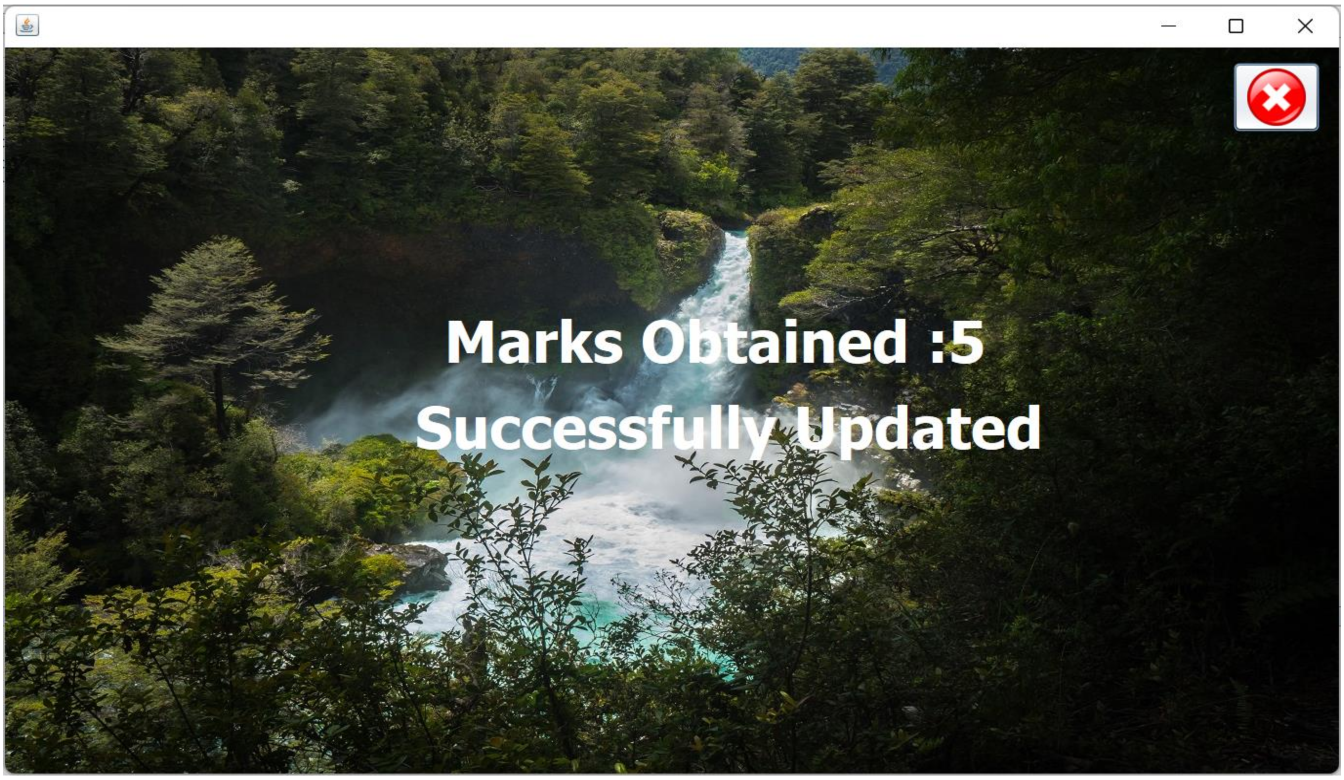
Here admin can view the result of all the student who had attend the test by filtering   student marks & student roll no as a report.



rollNo	name	fatherName	motherNa...	gender	contactNo	email	tenthUniv...	tenthPerc...	tenthPass...	twelveUni...	twelvePer...	twelvePas...	graduatio
1	Rohit	Maruti	Mansi	Male	12345678...	rohit@gm...	Sw	70	2016	Sw	75	2018	Sw
2	Rohit	M	M	Male	12345678...	rohit@gm...	sw	70	2018	sw	80	2018	sw
3	prem	s	a	Male	12345678...	prem@g...	sw	70	2016	sw	80	2018	sw
4	Tejal	R	S	Female	123567890	tejal@gm...	sw	70	2016	sw	80	2018	sw

Display of Result:

The final result of the Student get Displayed after Submitted the Quiz.



Marks Obtained :5

Successfully Updated

Sample Code:

Database Connection Code-

```
package Project;
Import java.sql.*;
public class ConnectionProvider {
     Connection con = null;
    public static Connection getCon()
    {
        try{
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/qems","root","root");
            return con;
        }
        catch(Exception e)
        {
            return null;
        }
    }

}
```

Form Code:

```
import javax.swing.JOptionPane;
public class index extends javax.swing.JFrame {
    public index() {
        initComponents();
    }

       private void initComponents() {

        jButton1 = new javax.swing.JButton();
        jButton2 = new javax.swing.JButton();
        jButton3 = new javax.swing.JButton();
        try {
            jLabel1 (javax.swing.JLabel)java.beans.Beans.instantiate(getClass().getClassLoader(),
"index_jLabel1");
        } catch (ClassNotFoundException e) {
            e.printStackTrace();
        } catch (java.io.IOException e) {
            e.printStackTrace();
        }

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        setTitle("Index Page");
        setUndecorated(true);
        getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

        jButton1.setFont(new java.awt.Font("Tahoma", 1, 14));
        jButton1.setIcon(new javax.swing.ImageIcon(getClass().getResource("/index student.png")));
        jButton1.setText("Student");
        jButton1.addActionListener(new java.awt.event.ActionListener() {
            Public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton1ActionPerformed(evt);
            }
        });
            }
        });
        });

        pack();
        setLocationRelativeTo(null);
    }
    private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
        int a=JOptionPane.showConfirmDialog(null,"Do you really want to Exit
Application","Select",JOptionPane.YES_NO_OPTION);
        if (a==0);
        {
            System.exit(0);
        }
    private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
        setVisible(false);
        new loginAdmin().setVisible(true);


    private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        setVisible(false);
        new studentDetails().setVisible(true);
    }


                java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new index().setVisible(true);
            }
        });
    }

}
```

Login Code:

```
import javax.swing.ImageIcon;
import javax.swing.JOptionPane;
public class loginAdmin extends javax.swing.JFrame {

    public loginAdmin() {
        initComponents();
    }

    }
    private void jTextField1ActionPerformed(java.awt.event.ActionEvent evt) {

    private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

        setVisible(false);
        new index().setVisible(true);
    }

    private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        if(jTextField1.getText().equals("admin") && jPasswordField1.getText().equals("Admin"))
        {
             setVisible(false);
             new adminHome().setVisible(true);
        }
        else
        {
            ImageIcon icon=new ImageIcon("Incorrect Password.PNG");
            JOptionPane.showMessageDialog(null,"<html><b style=\"color: red; font-size: 10px\">Incorrect
<br> Username or Password </b></html>","Show",JOptionPane.YES_NO_OPTION,icon);
        }
    }

    private void jCheckBox1ActionPerformed(java.awt.event.ActionEvent evt) {
        if(jCheckBox1.isSelected())
        {
            jPasswordField1.setEchoChar((char)0);
        }
        else
            jPasswordField1.setEchoChar('*');
    }


        }
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new loginAdmin().setVisible(true);
            }
        });
    }
```

Update Question Code:

```
import java.sql.*;
import Project.ConnectionProvider;
import javax.swing.JFrame;
import javax.swing.JOptionPane;
public class updateQuestion extends javax.swing.JFrame {

    public updateQuestion() {
        initComponents();
    }
     private void initComponents() {



        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
            }
        });

        pack();
        setLocationRelativeTo(null);

    private void jButton2ActionPerformed(java.awt.event.ActionEvent evt)
        String id = jTextField1.getText();
        try {
            Connection con = ConnectionProvider.getCon();
            Statement st = con.createStatement(ResultSet.TYPE_SCROLL_INSENSITIVE,
ResultSet.CONCUR_READ_ONLY);
            ResultSet rs = st.executeQuery("select *from question where id='" + id + "'");
            if (rs.next()) {
                jTextField2.setText(rs.getString(2));
                jTextField3.setText(rs.getString(3));
                jTextField4.setText(rs.getString(4));
                jTextField5.setText(rs.getString(5));
                jTextField6.setText(rs.getString(6));
                jTextField7.setText(rs.getString(7));
                jTextField1.setEditable(false);

            } else {
                JFrame jf = new JFrame();
                jf.setAlwaysOnTop(true);
                JOptionPane.showMessageDialog(jf, "Question Id does not Exist!");
            }
        } catch (Exception e) {
            JFrame jf = new JFrame();
            jf.setAlwaysOnTop(true);
            JOptionPane.showMessageDialog(jf, e);
        }

    private void jButton1ActionPerformed(java.awt.event.ActionEvent evt)
```

```
        adminHome.open = 0;
        setVisible(false);


    private void jTextField1ActionPerformed(java.awt.event.ActionEvent evt)
    Private void jButton3ActionPerformed(java.awt.event.ActionEvent evt)
        String id = jTextField1.getText();
        String name = jTextField2.getText();
        String opt1 = jTextField3.getText();
        String opt2 = jTextField4.getText();
        String opt3 = jTextField5.getText();
        String opt4 = jTextField6.getText();
        String answer = jTextField7.getText();
        try {
            Connection con = ConnectionProvider.getCon();
            Statement st = con.createStatement();
            PreparedStatement ps = con.prepareStatement("update question set
name=?,opt1=?,opt2=?,opt3=?,opt4=?,answer=? where id=?");
            ps.setString(1, name);
            ps.setString(2, opt1);
            ps.setString(3, opt2);
            ps.setString(4, opt3);
            ps.setString(5, opt4);
            ps.setString(6, answer);
            ps.setString(7, id);
            ps.executeUpdate();

            JFrame jf = new JFrame();
            jf.setAlwaysOnTop(true);
            JOptionPane.showMessageDialog(jf, "Successfully Updated");
            setVisible(false);
            new updateQuestion().setVisible(true);

        } catch (Exception e) {
            JFrame jf = new JFrame();
            jf.setAlwaysOnTop(true);
            JOptionPane.showMessageDialog(jf, e);

        }
        jTextField1.setText("");
        jTextField2.setText("");
        jTextField3.setText("");
        jTextField4.setText("");
        jTextField5.setText("");
        jTextField6.setText("");
        jTextField7.setText("");
        jTextField1.setEditable(true);
        }

        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new updateQuestion().setVisible(true);
```

Delete Question Code:

```
import java.sql.*;
import Project.ConnectionProvider;
import javax.swing.JFrame;
import javax.swing.JOptionPane;
public class updateQuestion extends javax.swing.JFrame {


    public updateQuestion() {
        initComponents();
    }

        String id = jTextField1.getText();
        try {
            Connection con = ConnectionProvider.getCon();
            Statement st = con.createStatement(ResultSet.TYPE_SCROLL_INSENSITIVE,
ResultSet.CONCUR_READ_ONLY);
            ResultSet rs = st.executeQuery("select *from question where id='" + id + "'");
            if (rs.next()) {
                jTextField2.setText(rs.getString(2));
                jTextField3.setText(rs.getString(3));
                jTextField4.setText(rs.getString(4));
                jTextField5.setText(rs.getString(5));
                jTextField6.setText(rs.getString(6));
                jTextField7.setText(rs.getString(7));
                jTextField1.setEditable(false);

            } else {
                JFrame jf = new JFrame();
                jf.setAlwaysOnTop(true);
                JOptionPane.showMessageDialog(jf, "Question Id does not Exist!");
            }
        } catch (Exception e) {
            JFrame jf = new JFrame();
            jf.setAlwaysOnTop(true);
            JOptionPane.showMessageDialog(jf, e);
        }
    }

    private void jButton1ActionPerformed(java.awt.event.ActionEvent evt)
        adminHome.open = 0;
        setVisible(false);
    }

    private void jTextField1ActionPerformed(java.awt.event.ActionEvent evt) {
    }
    private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
        String id = jTextField1.getText();
        String name = jTextField2.getText();
        String opt1 = jTextField3.getText();
        String opt2 = jTextField4.getText();
        String opt3 = jTextField5.getText();
        String opt4 = jTextField6.getText();
        String answer = jTextField7.getText();
        try {
            Connection con = ConnectionProvider.getCon();
            Statement st = con.createStatement();
            PreparedStatement ps = con.prepareStatement("update question set
name=?,opt1=?,opt2=?,opt3=?,opt4=?,answer=? where id=?");
            ps.setString(1, name);
            ps.setString(2, opt1);
            ps.setString(3, opt2);
            ps.setString(4, opt3);
            ps.setString(5, opt4);
            ps.setString(6, answer);
            ps.setString(7, id);
            ps.executeUpdate();

            JFrame jf = new JFrame();
            jf.setAlwaysOnTop(true);
            JOptionPane.showMessageDialog(jf, "Successfully Updated");
            setVisible(false);
            new updateQuestion().setVisible(true);

        } catch (Exception e) {
            JFrame jf = new JFrame();
            jf.setAlwaysOnTop(true);
            JOptionPane.showMessageDialog(jf, e);

        }

    private void jButton4ActionPerformed(java.awt.event.ActionEvent evt)
        jTextField1.setText("");
        jTextField2.setText("");
        jTextField3.setText("");
        jTextField4.setText("");
        jTextField5.setText("");
        jTextField6.setText("");
        jTextField7.setText("");
        jTextField1.setEditable(true);


        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new updateQuestion().setVisible(true);
            }
```

All Question Code:

```
import java.sql.*;
import Project.ConnectionProvider;
import javax.swing.JOptionPane;
import net.proteanit.sql.DbUtils;
public allQuestion() {
initComponents();
try
{
Connection con=ConnectionProvider.getCon();
Statement st=con.createStatement();
ResultSet rs=st.executeQuery("select *from question");
jTable1.setModel(DbUtils.resultSetToTableModel(rs));
}
catch(Exception e)
{
JOptionPane.showMessageDialog(null,e);
}
}


java.awt.EventQueue.invokeLater(new Runnable() {
public void run() {
new allQuestion().setVisible(true);
}
});
}
}
```

Student Registration Code:

```
import Project.ConnectionProvider;
import java.awt.Color;
import java.sql.*;
import java.text.SimpleDateFormat;
import java.util.Date;
import javax.swing.JOptionPane;
public class studentDetails extends javax.swing.JFrame {
    public studentDetails() {
        initComponents();
        jTextArea1.setEditable(false);
        SimpleDateFormat dFormat = new SimpleDateFormat("dd-MM-yyyy");
        Date date = new Date();
        jLabel4.setText(dFormat.format(date));
    }
    }
    private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
        String rollNo = jTextField1.getText();
        String name = jTextField2.getText();
        String fatherName = jTextField3.getText();
        String motherName = jTextField4.getText();
        String gender = (String) jComboBox1.getSelectedItem();
        String contactNo = jTextField5.getText();
        String email = jTextField6.getText();
        String tenthUniversityName = jTextField7.getText();
        String tenthPercentage = jTextField8.getText();
        String tenthPassoutYear = jTextField9.getText();
        String twelveUniversityName = jTextField10.getText();
        String twelvePercentage = jTextField11.getText();
        String twelvePassoutYear = jTextField12.getText();
        String graduationUniversityName = jTextField13.getText();
        String graduationPercentage = jTextField14.getText();
        String graduationPassoutYear = jTextField15.getText();
        String address = jTextField16.getText();
        String marks = "0";
        try {
            Connection con = ConnectionProvider.getCon();
            PreparedStatement ps = con.prepareStatement("insert into student
values(?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?)");
            ps.setString(1, rollNo);
            ps.setString(2, name);
            ps.setString(3, fatherName);
            ps.setString(4, motherName);
            ps.setString(5, gender);
            ps.setString(6, contactNo);
            ps.setString(7, email);
            ps.setString(8, tenthUniversityName);
            ps.setString(9, tenthPercentage);
            ps.setString(10, tenthPassoutYear);
            ps.setString(11, twelveUniversityName);
            ps.setString(12, twelvePercentage);
            ps.setString(13, twelvePassoutYear);

            ps.setString(14, graduationUniversityName);
            ps.setString(15, graduationPercentage);
            ps.setString(16, graduationPassoutYear);
            ps.setString(17, address);
            ps.setString(18, marks);
            ps.executeUpdate();
            setVisible(false);
            new instructionStudent(rollNo).setVisible(true);

        } catch (Exception e) {
            JOptionPane.showMessageDialog(null, e);
        }

    }

        }

        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new studentDetails().setVisible(true);
            }
        });
    }


}
```

Student Result Code:

```
import java.sql.*;
import Project.ConnectionProvider;
import javax.swing.JFrame;
import javax.swing.JOptionPane;
import net.proteanit.sql.DbUtils;
    public allStudentResult() {
        initComponents();
        try
        {
            Connection con=ConnectionProvider.getCon();
            Statement st=con.createStatement();
            ResultSet rs=st.executeQuery("select *from student");
            jTable1.setAutoResizeMode(jTable1.AUTO_RESIZE_OFF);
            jTable1.setModel(DbUtils.resultSetToTableModel(rs));
        }
        catch(Exception e )
        {
            JOptionPane.showMessageDialog(null,e);
        }
    }
    }
    private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

        adminHome.open=0;
        setVisible(false);
    }

    private void jTextField1KeyReleased(java.awt.event.KeyEvent evt) {
        int marks;
        if(jTextField1.getText().equals(""))
        {
            marks=0;
        }
        else
            marks=Integer.parseInt(jTextField1.getText());
         try
        {
            Connection con=ConnectionProvider.getCon();
            Statement st=con.createStatement();
            ResultSet rs=st.executeQuery("select *from student where marks >="+marks+"");
            jTable1.setAutoResizeMode(jTable1.AUTO_RESIZE_OFF);
            jTable1.setModel(DbUtils.resultSetToTableModel(rs));
        }
        catch(Exception e )
        {
            JFrame jf=new JFrame();
            jf.setAlwaysOnTop(true);
            JOptionPane.showMessageDialog(jf,e);
        }
    }


        }

        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new allStudentResult().setVisible(true);
            }
        });
    }
}
```

Validation Checks:

The process of evaluating software during or at the end of the development process to determine whether it satisfies specified requirements.

- Able the examiners to punch the MCQ questions online.
- Able the users to solve the questions online.
- Examiners can manage the information regarding exam.
- Correct answers will be evaluated by system (First it Should be determining by examiner).

Implementation and Maintenance:

To design and implement this project we plan that the project support to different types of users apart from its administrative part. When project is run for the first time it allowed the user to select as who he/she wants to login in the system. Project support login as teacher and login as student. If a user who is student, try to login as teacher system will not allow him and vice versa. User who add as teacher in system will be able to punch test and questions to system and also will be able to observe the result of the student which attempt tests. User who login to system as student will be able to select a particular test and attempt questions depend on this test. After attempting the test and submitting that user will receive a message that you have attempt the test successfully and if the user tries to attempt the same test, system will not allow him/her. Also a user which login to system as student will be able to observe the result of test he/she attempt.

Code review and walk through:

Both reviews and walk through used to deliver the correct codes. The code review is done as soon as code is ready to be executed, this is to reduce syntax errors and also check the coding standard.

Module Specification:

The modules specified in the design are implemented using various ".Java Swing ", and "class" files. These files in the source code shares the common routines and share the data structure, to establish the hierarchical relationship.

Compilation and Building the executable:

The source code for the system organized in various files is compiled using the "java" utility provided in the JAVA. The application is made to run in Net beans.

Java:

Java is a computer programming language that is concurrent, class-based, object- oriented, and specifically designed to have as few implementation dependencies as possible. It is intended to let application developers "write once, run anywhere" (WORA), meaning that code that runs on one platform does not need to be recompiled to run on another. Java applications are typically compiled to byte code (class file) that can run on any Java virtual machine (JVM) regardless of computer architecture. Java is, as of 2014, one of the most popular programming languages in use, particularly for client- server web applications, with a reported 9 million developers. Java was originally developed by James Gosling at Sun Microsystems (which has since merged into Oracle Corporation) and released in 1995 as a core component of Sun Microsystems' Java platform. The language derives much of its syntax from C and C++, but it has fewer low- level facilities than either of them.

The original and reference implementation Java compilers, virtual machines, and class libraries were developed by Sun from 1991 and first released in 1995.As of May 2007, in compliance with the specifications of the Java Community Process, Sun relicensed most of its Java technologies under the GNU. Others have also developed alternative implementations of these Sun technologies, such as the GNU Compiler for Java (byte code compiler), GNU Class path (standard libraries),and Iced Tea-Web (browser plug in for applets).

Advantages of java:

- Purely Object oriented.
- Platform independent.
- It is dynamic, simple and robust.
- Easy to learn.
- Multithreaded. Secure.
- Wide variety of Application Programmer Interfaces (APIS).
- Excellent networking capability.

The java Platform:

The Java platform is the name given to the computing platform from Oracle that helps users to run and develop Java applications. The platform does not just enable a user to run and develop Java application, but also features a wide variety of tools that can help developers work efficiently with the Java programming language

The platform consists of two essential software's:

- The Java Runtime Environment (JRE), which is needed to run Java applications and applets
- The Java Development Kit (JDK), which is needed to develop those Java applications and applets. If you have installed the JDK, you should know that it comes equipped with a JRE as well. So, for all the purposes of this book, you would only require the JDK.

Java Components:

Java has two components those are

1. Java virtual machine (JVM).

2. Java Application Programmers Interface (API).

JVM

A Java virtual machine (JVM) interprets compiled Java binary code (called byte code) for a computer's processor (or "hardware platform") so that it can perform a Java program's instructions. Java was designed to allow application programs to be built that could be run on any platform without having to be rewritten or recompiled by the programmer for each separate platform. A Java virtual machine makes this possible because it is aware of the specific instruction lengths and other particularities of the platform

API-

An application programming interface (API) is a library of functions that Java provides for programmers for common tasks like file transfer, networking, and data structures.

- Java Program
- Java API
- Java Virtual Machine
- Hardware-Based Platform

SWING:

Swing is a lightweight Java graphical user interface (GUI)that is used to create various applications. Swing has platform-independent components. It enablesthe user to create buttons and scroll bars. Swing includes packages for creating desktop applicationsin Java. Swing components are written in Java language. Itis a part of Java Foundation Classes (JFC).
Swing has about four times the number of User Interface [U1] components as AWT and is part of the standard Java distribution. By today's application GUI requirements, AWT is a limited implementation, not quite capable of providing the components required for developing complex GUI's required in modern commercial applications. The AWT component set has quite a few bugs and really does take up a lot of system resources when compared to equivalent Swing resources. Netscape introduced its Internet Foundation Classes [IFC] library for use with Java. Its Classes became very popular with programmers creating GUI's for commercial applications.

- Swing is a Set Of API (API- Set Of Classes and Interfaces)
- Swing is Provided to Design a Graphical User Interfaces
- Swing is an Extension library to the AWT (Abstract Window Toolkit)
- Includes New and improved Components that have been enhancing the looks and Functionality of GUI's
- Swing can be used to build(Develop) The Standalone swing GUI Apps Also as Servlets And Applets
- It Employs model/view design architecture
- Swing is more portable and more flexible than AWT, The Swing is built on top of the AWT
- Swing is Entirely written in Java
- Java Swing Components are Platform-independent And The Swing Components are lightweight

MYSQL:

MySQL ("My S-Q-L", officially, but also called "My Sequel") is (as of July 2013) the world's second most widely used open-source relational database management system (RDBMS).
It is named after co-founder Michael Widenius daughter, my. The SQL phrase stands for Structured Query Language. The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements.
MySQL was owned and sponsored by a single for- profit firm, the Swedish company MySQL AB, now owned by Oracle Corporation. MySQL is a popular choice of database for use in web applications, and is a central component of the widely used LAMP open source web application software stack (and other 'AMP' stacks). LAMP is an acronym for "Linux,
Apache, MySQL, Perl/PHP/Python." Free-software-open source projects that require afull-featured database management system often use MySQL.
For commercial use, several paid editions areavailable, and offer additional functionality.
Applications which use MySQL databases include: TYPO3, MODx, Joomla, WordPress, phpBB, MyBB , Drupal and other software. MySQL is also used inmany high profile, large-scale websites, including Wikipedia, Google (though not for searches), Facebook, Twitter, Flickr, and YouTube.

Java Data Base Connectivity (JDBC):

In an enterprise computing which is largely the black art of managing huge databases? People associated with the enterprise need to be able to use and update the data easily, quickly and securely,

The powerful Java Data Base Connectivity (JDBC) suit the java.sql. package realizes java's promise as a serious business programming tools.

Java Data Base Connectivity is a standard SQL database access interface providing uniform access to a wide range of relational databases. It also provides a common base on which higher level tools and inter faces can be built. This comes with an "ODBC Bridge". That bridge is a library, which implements JDBC in terms of ODBC standard APL.

There are many types of drivers used in connecting such as Native API Partly Java driver, a net protocol all java driver. The driver used here is JDBC- ODBC Bridge.

JDBC-ODBC bridge plus ODBC driver -This is the crudest possible solution. Applets access data base using a combination of the JDBC-ODBC Bridge and an ODBC driver. This requires both drivers to be installed on the user's computer- A very cumbersome solution for both internet and intranet users.

JDBCTM is a Java Tm API for executing SQL statements. (As a point of interest, JDBC is a trademarked name and is not an acronym; nevertheless, JDBC is often thought of as standing for "Java Database Connectivity".) It consists of a set of classes and interfaces written in the Java programming language . JDBC provides a standard API for tool/database developers and makes it possible to write database applications using a pure Java API.

Using JDBC, it is easy to send SQL statements to virtually any relational database. In other words, with the JDBC API, it isn't necessary to write one program to access a Sybase database, another program to access an MYSQL

ie, da database, another program to access an Informix database, and so on. One can write a single program using the JDBC API, and the program will be able to send SQL statements to the appropriate database. And, with an application written in the Java programming language, one also doesn't have to worry about writing different applications to run on different platforms. The combination of Java and JDBC lets a programmer write it once and run it anywhere.

Java being robust, secure, easy to use, easy to understand, and automatically downloadable on a network, is an excellent language basis for database applications.

What is needed is a way for Java applications to talk to a variety of different databases. JDBC is the mechanism for doing this. JDBC extends what can be done in Java. For example, with Java and the JDBC API, it is possible to publish a web page containing an applet that uses information obtained from a remote database. Or an enterprise can use JDBC to connect all its employees (even if they are using a conglomeration of Windows, Macintosh, and UNIX machines) to one or more internal databases via an intranet. With more and more programmers using the Java programming language, the need for easy database access from Java is continuing to grow.

JDBC does the following things:

- Establish a connection with a database
- Send SQL statements
- Process the results.

The following code fragment gives a basic example of these three steps:

```
 Class.forName("com.mysql.cj.jdbc.Driver");

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/qems","root","root");
        return con;
```

Connection:

A connection object represents a connection with a database. A connection session includes the SQL statements that are executed and the results that are returned over the connection. A single application can have one or more connections with a single database, or it can have connections with many different databases.

Opening a Connection:

The standard way to establish a connection with a database is to call the method DriverManager.getConnection. This method takes a string containing URL. The Driver Manager class, referred to a the JDBC management layer, attempts to locate a driver than can connect to the database represented Driver classes, and when the method get Connection is called, it checks with each driver in the list until it finds one that can connect uses this URL to actually establish the connection.

Sending Statement:

Once a connection is established, it is used to pass SQL statements to its underlying database. JDBC does not put any restrictions on the kinds of SQL statements that can be sent; this provides a great deal of flexibility, allowing the use of database-specific statements or even Non-SQL statements. It requires, however, that the user be responsible for making sure that the underlying database can process the SQL statements being sent and suffer the consequences if it cannot.

Driver Manager:

The Driver Manager class is the management layer of JDBC, working between the user and the drivers. It keeps track of the drivers that are available and handles establishing a connection between a database and the appropriate driver. It addition, the driver manager class attends to things like driver login time limits and the printing of log and tracing messages. The only method in this class that a general programmer needs to use directly is DriverManager.getConnection. As its name implies, this method establishes a connection to a database.

Why we need JDBC?

- ODBC is not appropriate for direct use from Java because it uses a C interfaces.
- ODBC is hard to leam. It mixes simple and advanced features together, and it has
- Complex options even for simple queries.
- A Java API like JDBC is needed in order to enable a "Pure Java "solution.
- When ODBC is used, the ODBC driver manager and drivers must be manually
- Installed on every client machine.

Functional Requirement:

Admin:

Admin has given permission to add Question Update Question Delete Question He can also view thedetails of Students and the result of the appeared Student and the details of the Student

User:

User is a one of the main module in our project here we have provided the Registration details form User has to fill the registration form and proceed for the quiz after submitted the Quiz final report of the quiz get displayed.

System Maintenance:

The term "software maintenance" is used to describe the software engineering activities that occur following delivery of a software product to the customer. The maintenance phase of the software life cycle is the time period in which a software product performs useful work. Maintenance activities involve making enhancement to software products, adapting products to new environments and correcting problems. Software product enhancement may involve providing new functional capabilities, improving user display and modes of interaction, and upgrading external documents. Adaptation of software to a new environment may involve moving the software to a different machine. Problem correction involves modification and revalidation of software to correct errors. The enhancement of this project can be accomplished easily. That is, any new functional capabilities can be added to the project by simply including the new module in the homepage and giving a hyperlink to that module. Adaptation of this project to a new environment is also performed easily.

Even with the best quality assurance activities, it is likely that the customer will uncover defects in the software. Corrective maintenance changes the software to correct defects

Future scope of the Mini Project:

As mention the project which is coded in NetBeans IDE and JavaScript but this project is only for MCQ test but in future we have plan to extended it to support subjective type of questions with more functionality.

We will add administrative part on it which able the system to delete test, add user, delete user and so on

To conclude, this is a simple Online MCQ Quiz which able a teacher to punch MCQ question to system which will be store in SQL server database and able the student to attempt any test for once.

The marks of student will be calculated according to question they attempt and will be displayed by the system to teachers and student.

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